

ABSTRACT OF THE DISCLOSURE

An array of solder structures comprising a plurality of radially-curved exterior surfaces, each one enclosing a predetermined-sized cavity that can be used for flexibly joining together at predetermined conductive contact points two planar elements having dissimilar properties. By assembling the two planar elements in a tiered arrangement, one planar element having an array of annular conductive pads and the other planar element having either a corresponding array of annular or circular conductive pads, separated by an array of spherical solder balls comprised of solder and a fluxing agent, a hollow solder structure can be created during a melting and subsequent cooling of the solder compound. The plasticity/resiliency characteristics of the resulting hollow solder structure absorbs lateral movement of the two planar elements relative to each other without degradation of the solder joint.